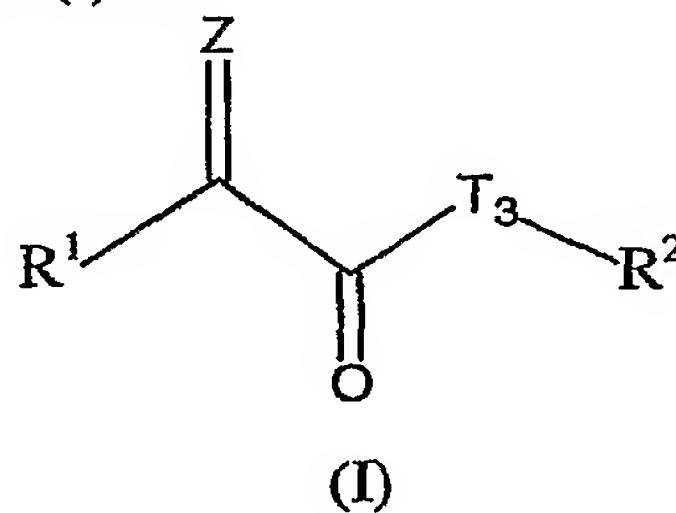


## CLAIMS

What is claimed is:

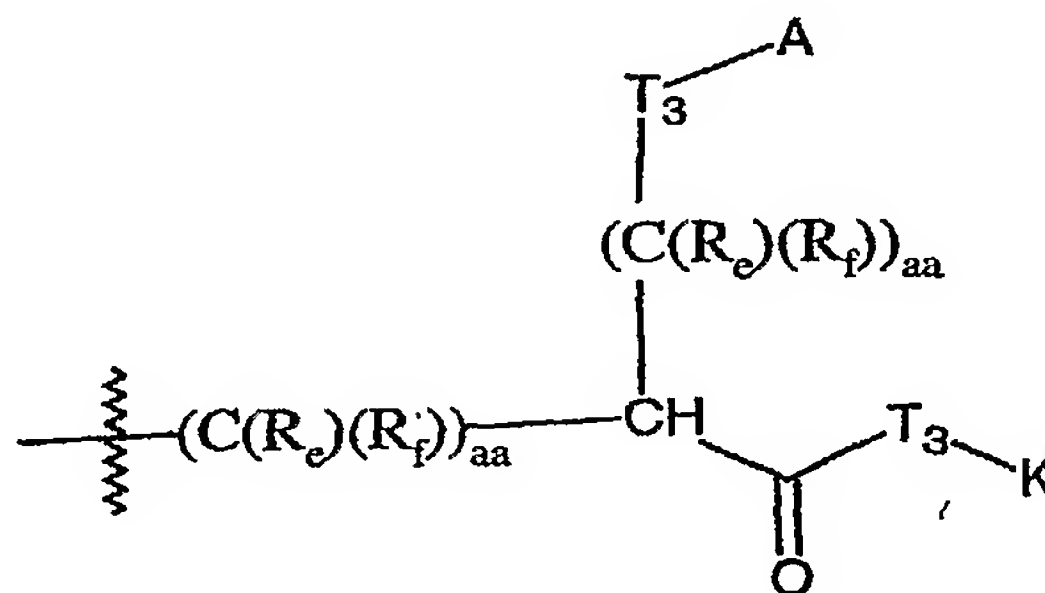
1. A compound of Formula (I), or a pharmaceutically acceptable salt thereof, wherein the compound of Formula (I) is:



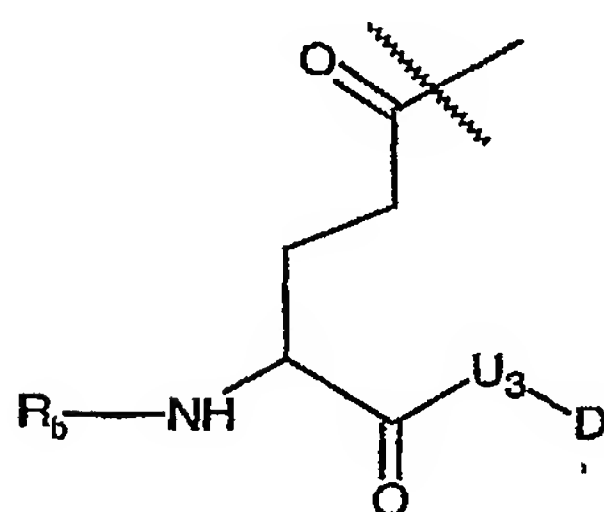
wherein:

$\text{R}^1$  is  $\text{K}'$  or  $-(\text{C}(\text{R}_e)(\text{R}_f))_{aa} - \text{T}_3 - \text{A}$ ;

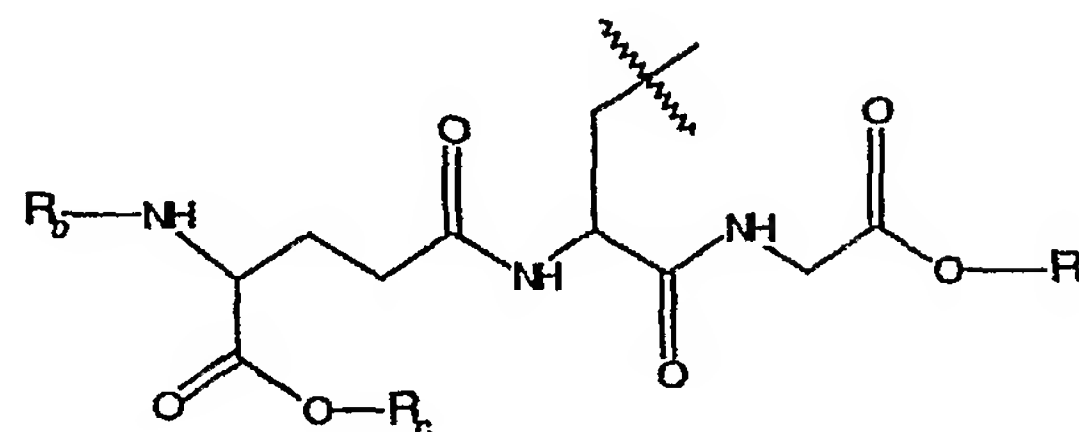
$\text{R}^2$  is  $\text{K}$ ,  $\text{K}'$  or



A is a hydrogen,  $\text{K}$ ,  $\text{K}'$ ,



or



$\text{R}_b$  is a hydrogen, a lower alkyl group or  $-\text{COCH}_3$ ;

$\text{R}_c$  is a hydrogen or a lower alkyl group;

D is a hydrogen,  $\text{V}_3$ ,  $\text{K}$  or  $\text{K}'$ ;

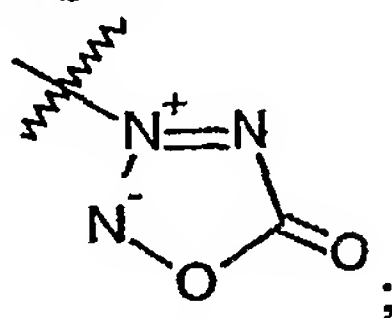
Z is an oxo, an oxime, a hydrozone,  $=\text{N}-\text{O}-\text{A}$ ,  $-\text{N}-(\text{OA})-\text{R}_{82}$ ,  $=\text{N}-\text{N}-(\text{A})(\text{R}_{82})$  or  $=\text{N}-(\text{R}_{82})$ ;

$R_{82}$  is a hydrogen, K, K', an alkyl group, an aryl group, an alkylsulfonyl group, an arylsulfonyl group, a carboxylic ester, an alkylcarbonyl group, an arylcarbonyl group, a carboxamido group, an alkoxyalkyl group or an alkoxyaryl group;

K is  $-W_a-E_b-(C(R_e)(R_f))_{p1}-E_c-(C(R_e)(R_f))_x-W_d-(C(R_e)(R_f))_y-W_i-E_j-W_g-$   
 $(C(R_e)(R_f))_z-(U_3)_{bb}-V_3$ ;

K' is  $-W_a-E_b-(C(R_e)(R_f))_{p1}-E_c-(C(R_e)(R_f))_x-W_d-(C(R_e)(R_f))_y-W_i-E_j-W_g-$   
 $(C(R_e)(R_f))_z-R_e$ ;

$V_3$  is  $-\text{NO}$ ,  $-\text{NO}_2$  or



$U_3$  is an oxygen, sulfur or  $-\text{N}(R_a)R_i$ ;

a, b, c, d, g, i and j are each independently an integer from 0 to 3;

aa is an integer from 0 to 5;

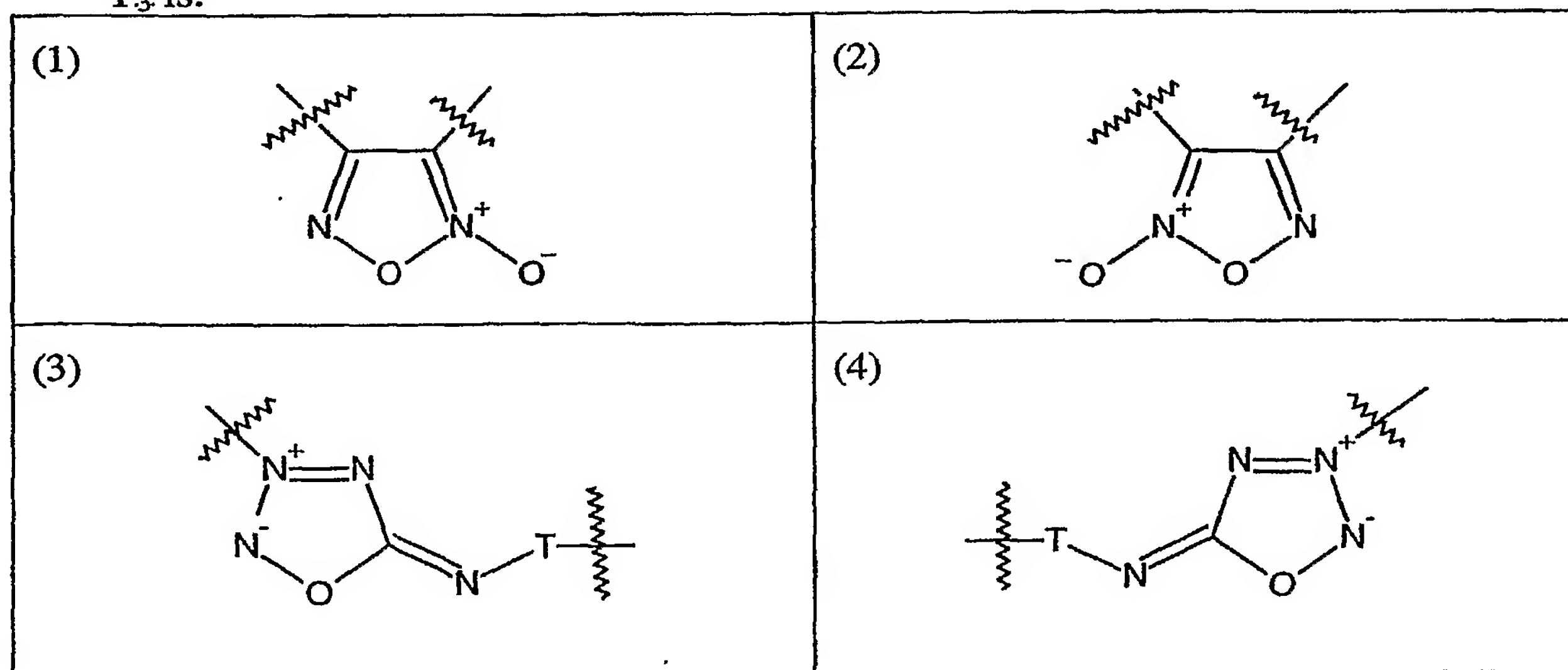
bb is an integer 0 or 1;

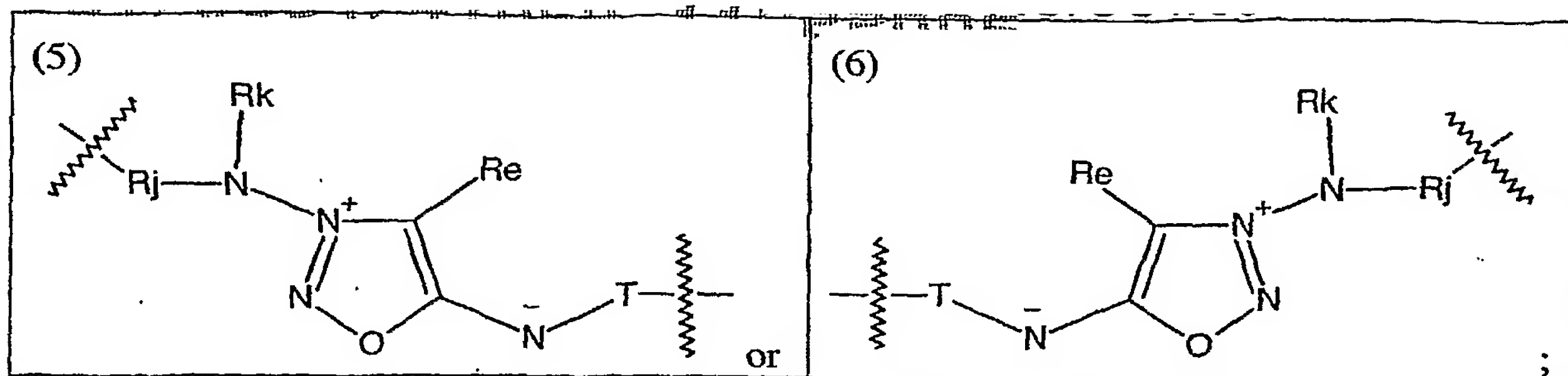
$p_1$ , x, y and z are each independently an integer from 0 to 10;

W at each occurrence is independently  $-\text{C}(\text{O})-$ ,  $-\text{C}(\text{S})-$ ,  $-\text{T}_3-$ ,  $-(C(R_e)(R_f))_h-$ , an alkyl group, an aryl group, a heterocyclic ring, an arylheterocyclic ring,  $-(\text{CH}_2\text{CH}_2\text{O})_{q1}-$  or a heterocyclic nitric oxide donor;

E at each occurrence is independently  $-\text{T}_3-$ , an alkyl group, an aryl group,  $-(C(R_e)(R_f))_h-$ , a heterocyclic ring, an arylheterocyclic ring,  $-(\text{CH}_2\text{CH}_2\text{O})_{q1}-$  or  $Y_3$ ;

$Y_3$  is:





T is a  $-S(O)_o-$ ; a carbonyl or a covalent bond;

o is an integer from 0 to 2;

$R_j$  and  $R_k$  are independently selected from an alkyl group, an aryl group, or  $R_j$  and  $R_k$  taken together with the nitrogen atom to which they are attached are a heterocyclic ring;

$T_3$  at each occurrence is independently a covalent bond, a carbonyl, an oxygen,  $-S(O)_o-$  or  $-N(R_a)R_i$ ;

h is an integer from 1 to 10;

$q_1$  is an integer from 1 to 5;

$R_e$  and  $R_f$  are each independently a hydrogen, an alkyl, a cycloalkoxy, a halogen, a hydroxy, an hydroxyalkyl, an alkoxyalkyl, an arylheterocyclic ring, an alkylaryl, an alkylcycloalkyl, an alkylheterocyclic ring, a cycloalkylalkyl, a cycloalkylthio, an arylalkylthio, an arylalkylthioalkyl, an alkylthioalkyl a cycloalkenyl, an heterocyclicalkyl, an alkoxy, a haloalkoxy, an amino, an alkylamino, a dialkylamino, an arylamino, a diarylamino, an alkylaryl amino, an alkoxyhaloalkyl, a sulfonic acid, a sulfonic ester, an alkylsulfonic acid, an arylsulfonic acid, an arylalkoxy, an alkylthio, an arylthio, a cyano an aminoalkyl, an aminoaryl, an aryl, an arylalkyl, an alkylaryl, a carboxamido, a alkylcarboxamido, an arylcarboxamido, an amidyl, a carboxyl, a carbamoyl, an alkylcarboxylic acid, an arylcarboxylic acid, an alkylcarbonyl, an arylcarbonyl, an ester, a carboxylic ester, an alkylcarboxylic ester, an arylcarboxylic ester, a sulfonamido, an alkylsulfonamido, an arylsulfonamido, an alkylsulfonyl, an alkylsulfonyloxy, an arylsulfonyl, arylsulphonyloxy, a sulfonic ester, an alkyl ester, an aryl ester, a urea, a phosphoryl, a nitro,  $-(U_3)_{bb}-V_3$ ,  $-C(R_e)(R_f)_k-(U_3)_{bb}-V_3$ , or  $R_e$  and  $R_f$  taken together with the carbons to which they are attached form a carbonyl, a methanthial, a heterocyclic ring, a cycloalkyl group, an aryl group, an oxime, a hydrazone or a bridged cycloalkyl group;

k is an integer from 1 to 3;

$R_a$  is a lone pair of electrons, a hydrogen or an alkyl group;

$R_i$  is a hydrogen, an alkyl, an aryl, an alkylcarboxylic acid, an arylcarboxylic acid, an alkylcarboxylic ester, an arylcarboxylic ester, an alkylcarboxamido, an arylcarboxamido, an

alkylaryl, an alkylsulfinyl, an alkylsulfonyl, an alkylsulfonyloxy, an arylsulfinyl, an arylsulfonyl, arylsulphonyloxy, a sulfonamido, a carboxamido, a carboxylic ester, an aminoalkyl, an aminoaryl,  $-\text{CH}_2-\text{C}-((\text{U}_3)_{\text{bb}}-\text{V}_3)(\text{R}_e)(\text{R}_f)$ , a bond to an adjacent atom creating a double bond to that atom,  $-(\text{N}_2\text{O}_2)^-\cdot\text{M}_1^+$ , wherein  $\text{M}_1^+$  is an organic or inorganic cation;

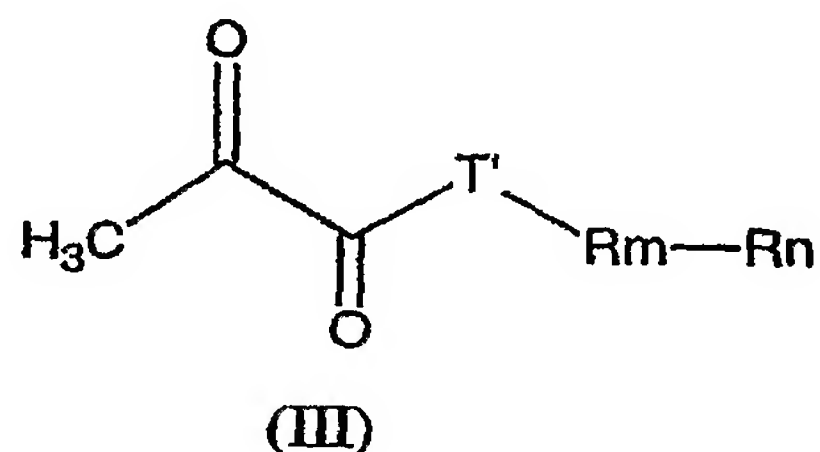
5 with the proviso that the pyruvate compound of Formula (I) must contain at least one nitric oxide releasing group linked to the pyruvate compound through an oxygen atom, a nitrogen atom or a sulfur atom.

2. A composition comprising the compound of claim 1 and a pharmaceutically acceptable carrier.

10 3. The compound of claim 1, wherein the nitric oxide releasing group is a nitro group, a nitroso group, a furoxan, a sydnonimine, an oxatriazole-5-one and/or an oxatriazole-5-imine.

4. The compound of claim 1, wherein the compound of Formula (I) is a compound of Formula (III);

15 wherein the compound of Formula (III) is:



wherein

20  $\text{R}_m\text{-R}_n$  taken together can be a hydrogen atom; or

$\text{R}_m$  is:

(i) a covalent bond;

(ii)  $-\text{C}((\text{R}_e)(\text{R}_f))_{2-5}-$ ;

(iii)  $-\text{C}((\text{R}_e)(\text{R}_f))_{2-5}-\text{T}'-$ ;

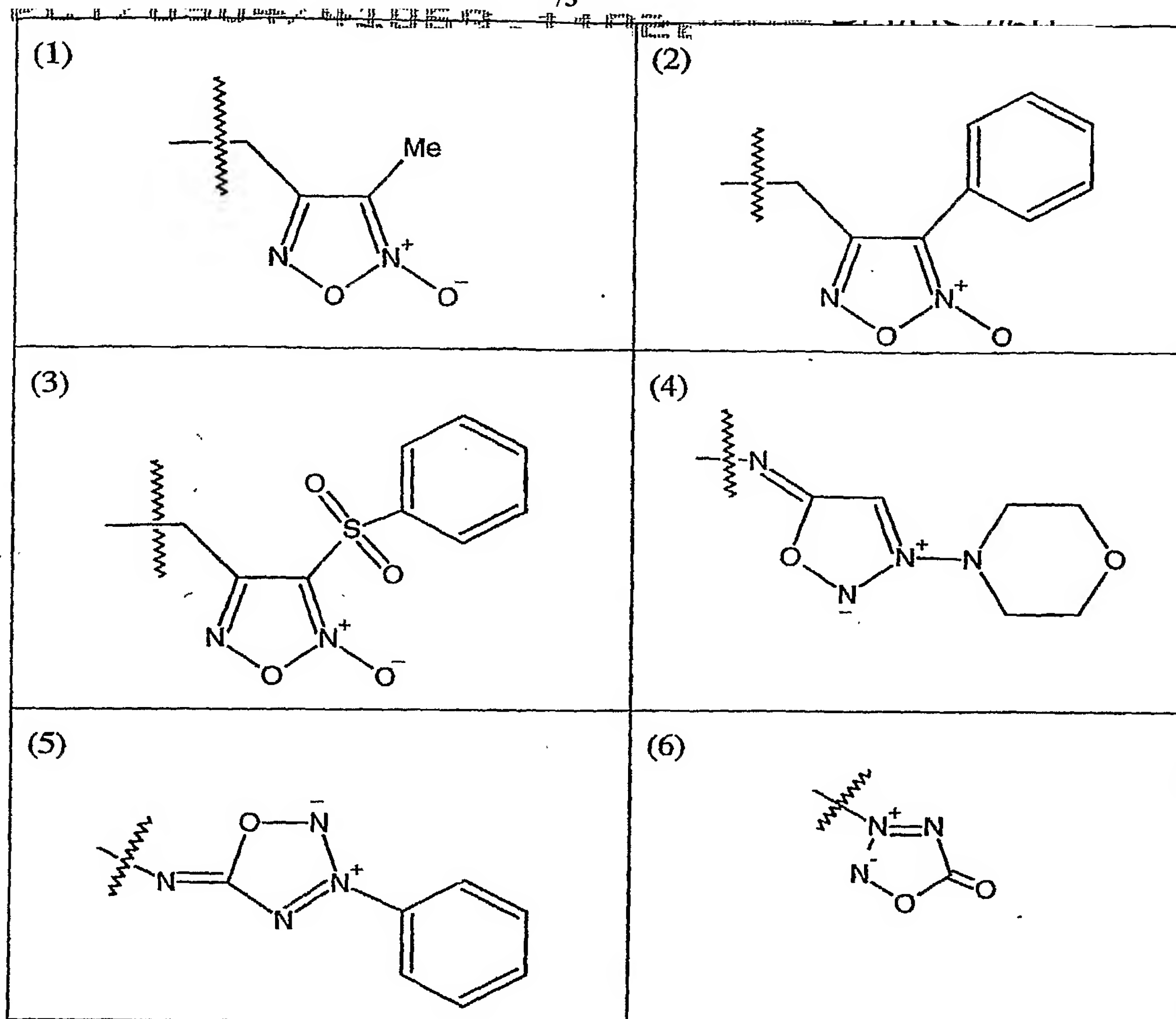
25 (iv)  $-\text{C}((\text{R}_e)(\text{R}_f))_{2-5}-\text{T}'-\text{C}(\text{O})-$ ;

(v) a heterocyclic ring; or

(vi) a heterocyclic ring- $\text{C}(\text{O})-$ ;

$\text{R}_n$  is:

a hydrogen or:



wherein:

T' is oxygen, sulfur or NR<sub>6</sub>;

R<sub>6</sub> is a hydrogen, a lower alkyl group, an aryl group;

R<sub>e</sub> and R<sub>f</sub> are as defined herein; and

with the proviso that the compounds of Formula (III) must contain at least one nitric oxide releasing group linked to the pyruvate compound through an oxygen atom, a nitrogen atom or a sulfur atom.

5. A method for treating a cardiovascular disease in a patient in need thereof comprising administering to the patient a therapeutically effective amount of the composition of claim 2.

6. The method of claim 5, wherein the cardiovascular disease is congestive heart failure, restenosis, hypertension, diastolic dysfunction, a coronary artery disease, myocardial infarction, cerebral infarction, atherosclerosis, atherogenesis, cerebrovascular disease, angina, aneurysm, ischemic heart disease, cerebral ischemia, myocardial ischemia, thrombosis, platelet aggregation, platelet adhesion, smooth muscle cell proliferation, a vascular or non-

vascular complication associated with the use of a medical device, a wound associated with the use of a medical device, vascular or non-vascular wall damage, peripheral vascular disease, neointimal hyperplasia following percutaneous transluminal coronary angiograph, vascular grafting, coronary artery bypass surgery, a thromboembolic event, post-angioplasty restenosis, coronary plaque inflammation, hypercholesterolemia, embolism, stroke, shock, arrhythmia, atrial fibrillation or atrial flutter, or thrombotic occlusion and reclusion cerebrovascular incident.

7. The method of claim 6, wherein the cardiovascular disease is congestive heart failure, hypertension or diastolic dysfunction.

8. A method for treating a renovascular disease in a patient in need thereof comprising administering to the patient a therapeutically effective amount of the composition of claim 2.

9. The method of claim 12, wherein the renovascular disease is renal failure or renal insufficiency.

10. A method for treating diabetes; treating a disease resulting from oxidative stress; treating an endothelial dysfunction; treating a disease caused by endothelial dysfunction; treating cirrhosis; treating pre-eclampsia; treating osteoporosis; treating nephropathy; reperfusing injury following ischemia and/or preserving a tissue, an organ an organ part and/or a limb in a patient in need thereof comprising administering to the patient a therapeutically effective amount of the composition of claim 2.

11. The composition of claim 2, further comprising (i) at least one therapeutic agent; (ii) at least one nitric oxide donor compound; or (iii) at least one therapeutic agent and at least one nitric oxide donor compound.

12. The composition of claim 11, wherein the therapeutic agent is an aldosterone antagonist, an alpha-adrenergic receptor antagonist, an angiotensin II antagonist, an angiotensin-converting enzyme inhibitor, an antidiabetic compound, an anti-hyperlipidemic compound, an antioxidant, an antithrombotic and vasodilator compound, a  $\beta$ -adrenergic antagonist, a calcium channel blocker, a digitalis, a diuretic, an endothelin antagonist, a hydralazine compound, a  $H_2$  receptor antagonist, a neutral endopeptidase inhibitor, a nonsteroidal antiinflammatory compound, a phosphodiesterase inhibitor, a potassium channel blocker, a platelet reducing agent, a proton pump inhibitor, a renin inhibitor, a selective cyclooxygenase-2 inhibitor, or a combination of two or more thereof.

13. The composition of claim 12, wherein the therapeutic agent is at least one compound selected from the group consisting of an aldosterone antagonist, an angiotensin II antagonist, an angiotensin-converting enzyme inhibitor, a  $\beta$ -adrenergic antagonist, a diuretic



and a hydralazine compound.

14. The composition of claim 13, wherein the aldosterone antagonist is eplerenone or spironolactone; the angiotensin II antagonist is candesartan cilexetil, eprosartan mesylate, irbesartan, losartan potassium, medoxomil, telmisartan, trandolapril, trandolaprilat or  
5 valsartan; the angiotensin-converting enzyme inhibitor is benazepril hydrochloride, captopril, enalapril maleate, fosinopril sodium, lisinopril, moexipril hydrochloride, quinapril hydrochloride; the  $\beta$ -adrenergic antagonist is bisoprolol fumarate, carvedilol, metoprolol tartrate, propranolol hydrochloride or timolol maleate; the diuretic is amiloride hydrochloride, chlorthalidone, hydrochlorothiazide or triamterene; and the hydralazine compound is  
10 hydralazine hydrochloride.

15. The composition of claim 11, wherein the nitric oxide donor compound is selected from the group consisting of a S-nitrosothiol, a nitrite, a nitrate, a S-nitrothiol, a sydnonimine, a NONOate, a N-nitrosoamine, a N-hydroxyl nitrosamine, a nitrosimine, a diazetine dioxide, an oxatriazole 5-imine, an oxatriazole-5-one, an oxime, a hydroxylamine, a  
15 N-hydroxyguanidine, a hydroxyurea and/or a furoxan.

16. The method of claim 5, 8 or 10, further comprising administering (i) at least one therapeutic agent; (ii) at least one nitric oxide donor compound; or (iii) at least one therapeutic agent and at least one nitric oxide donor compound.

17. The method of claim 16, wherein the therapeutic agent is an aldosterone  
20 antagonist, an alpha-adrenergic receptor antagonist, an angiotensin II antagonist, an angiotensin-converting enzyme inhibitor, an antidiabetic compound, an anti-hyperlipidemic compound, an antioxidant, an antithrombotic and vasodilator compound, a  $\beta$ -adrenergic antagonist, a calcium channel blocker, a digitalis, a diuretic, an endothelin antagonist, a hydralazine compound, a  $H_2$  receptor antagonist, a neutral endopeptidase inhibitor, a  
25 nonsteroidal antiinflammatory compound, a phosphodiesterase inhibitor, a potassium channel blocker, a platelet reducing agent, a proton pump inhibitor, a renin inhibitor, a selective cyclooxygenase-2 inhibitor, or a combination of two or more thereof.

18. The method of claim 17, wherein the nitric oxide donor compound is selected from the group consisting of a S-nitrosothiol, a nitrite, a nitrate, a S-nitrothiol, a sydnonimine, a NONOate, a N-nitrosoamine, a N-hydroxyl nitrosamine, a nitrosimine, a diazetine dioxide,  
30 an oxatriazole 5-imine, an oxatriazole-5-one, an oxime, a hydroxylamine, a N-hydroxyguanidine, a hydroxyurea and/or a furoxan.

19. A kit comprising at least one compound of claim 1.

20. A compound selected from the group consisting of:  
35 1-[4-(nitrooxy)piperidyl]propane-1,2-dione;

- N-[3-(nitrooxy)propyl]-2-oxopropanamide;  
 N-[2,2-dimethyl-3-(nitrooxy)propyl]-2-oxopropanamide;  
 N-[(1S)-2-(nitrooxy)-1-phenylethyl]-2-oxopropanamide;  
 N-[(1S)-2-(Nitrooxy)-1-benzylethyl]-2-oxopropanamide;  
 5 N-[(5-hydroxy-4-methyl(1,2,5-oxadiazol-3-yl))methyl]-N-methyl-2-oxopropanamide;  
 (4R)-2-methyl-5-(nitrooxy)-N-(2-oxo(3-3,4,5-trihydrothienyl))-4-phenyl-3-azapent-2-  
 enamide;  
 {3-[(nitrooxy)methyl]phenyl}methyl 2-oxopropanoate;  
 (4-(nitrooxy)piperidyl)methyl-2-oxopropanoate;  
 10 2-(4-(nitrooxy)piperidyl)ethyl-2-oxopropanoate;  
 3-(4-(nitrooxy)piperidyl)propyl-2-oxopropanoate;  
 1-(4-(nitrooxy)piperidyl)propane-1,2-dione;  
 (2R)-2,3-bis(nitrooxy)propyl-2-oxopropanoate;  
 (4-(2-(nitrooxy)ethyl)phenyl)methyl-2-oxopropanoate;  
 15 (4-((nitrooxy)methyl)piperziny)l)methyl-2-oxopropanoate;  
 2-(4-((nitrooxy)methyl)piperziny)l)ethyl-2-oxopropanoate;  
 3-(4-((nitrooxy)methyl)piperziny)l)propyl-2-oxopropanoate;  
 (4-(2-(nitrooxy)ethyl)piperziny)l)methyl-2-oxopropanoate;  
 2-(4-(2-(nitrooxy)ethyl)piperziny)l)ethyl-2-oxopropanoate;  
 20 3-(4-(2-(nitrooxy)ethyl)piperziny)l)propyl-2-oxopropanoate;  
 (4-(3-(nitrooxy)propyl)piperziny)l)methyl-2-oxopropanoate;  
 2-(4-(3-(nitrooxy)propyl)piperziny)l)ethyl-2-oxopropanoate;  
 3-(4-(3-(nitrooxy)propyl)piperziny)l)propyl-2-oxopropanoate;  
 1-(2-((nitrooxy)methyl)piperidyl)propane-1,2-dione;  
 25 1-(3-((nitrooxy)methyl)piperidyl)propane-1,2-dione;  
 1-(4-((nitrooxy)methyl)piperidyl)propane-1,2-dione;  
 methyl (2R)-2-amino-3-((3-((2-(2-(nitrooxy)ethoxy)ethyl)amino)-2,3-dioxopropyl)thio)  
 propanoate;  
 4-(N-((1R)-1-(methoxycarbonyl)-2-(2-(N-(2-(2-(nitrooxy)ethoxy)ethyl)carbamoyl)-2-  
 30 oxoethylthio)ethyl)carbamoyl)(2S)-2-aminobutanoic acid;  
 2-(4-(2-(nitrooxy)ethoxy)phenoxy)ethyl 3-((2R)-2-amino-2-(methoxycarbonyl)ethylthio)-2-  
 oxopropanoate;  
 4-(N-((1R)-1-(methoxycarbonyl)-2-(2-((2-(4-(2-  
 (nitrooxy)ethoxy)phenoxy)ethyl)oxycarbonyl)-2-oxoethylthio)ethyl)carbamoyl)(2S)-2-  
 35 aminobutanoic acid;



methyl (2*R*)-2-amino-3-((3-((3-((nitrooxy)methyl)benzyl)oxy)-2,3-dioxopropyl)thio)propanoate;

4-(*N*-((1*R*)-1-(methoxycarbonyl)-2-(2-(((3-((nitrooxy)methyl)phenyl)methyl)oxycarbonyl)-2-oxoethylthio)ethyl)carbamoyl)(2*S*)-2-aminobutanoic acid;

5 methyl (2*R*)-2-amino-3-((3-((4-((nitrooxy)methyl)benzyl)oxy)-2,3-dioxopropyl)thio)propanoate;

4-(*N*-((1*R*)-1-(methoxycarbonyl)-2-(2-(((4-((nitrooxy)methyl)phenyl)methyl)oxycarbonyl)-2-oxoethylthio)ethyl)carbamoyl)(2*S*)-2-aminobutanoic acid;

methyl (2*R*)-2-amino-3-((3-((3-(nitrooxy)propyl)amino)-2,3-dioxopropyl)thio)propanoate;

10 3-(nitrooxy)propyl 2-oxopropanoate;

3-(pyruvoylamino)propyl nitrate;

2,2-dimethyl-3-(nitrooxy)propyl 2-oxopropanoate;

2,2-dimethyl-3-(pyruvoylamino)propyl nitrate;

3-(nitrooxy)-2-[(nitrooxy)methyl]propyl 2-oxopropanoate;

15 2-(nitrooxy)-1-[(nitrooxy)methyl]ethyl 2-oxopropanoate;

2-(pyruvoylamino)propane-1,3-diyl dinitrate;

3,5-bis[(nitrooxy)methyl]benzyl 2-oxopropanoate;

2-methyl-3-(nitrooxy)-2-[(nitrooxy)methyl]propyl 2-oxopropanoate;

3-(nitrooxy)-2,2-bis[(nitrooxy)methyl]propyl 2-oxopropanoate;

20 2-{4-[2-(nitrooxy)ethoxy]phenoxy}ethyl 2-oxopropanoate;

2-nitro-3-(nitrooxy)-2-[(nitrooxy)methyl]propyl 2-oxopropanoate;

2-[2-(pyruvoylamino)ethoxy]ethyl nitrate;

3-[(nitrooxy)methyl]benzyl 2-oxopropanoate;

4-[(nitrooxy)methyl]benzyl 2-oxopropanoate;

25 (2*S*)-2-amino-5-[3-(nitrooxy)-2-[(nitrooxy)methyl]-2-(pyruvoylamino)propoxy]-5-oxopentanoic acid;

(2*S*)-2-amino-5-({2-(nitrooxy)-1-[(nitrooxy)methyl]-1-[(pyruvoyloxy)methyl]ethyl}amino)-5-oxopentanoic acid;

(2*S*)-2-amino-5-{3-(nitrooxy)-2-[(pyruvoyloxy)methyl]propoxy}-5-oxopentanoic acid;

30 (2*S*)-2-amino-5-{2-methyl-3-(nitrooxy)-2-[(pyruvoyloxy)methyl]propoxy}-5-oxopentanoic acid;

(2*S*)-2-amino-5-{3-(nitrooxy)-2-[(nitrooxy)methyl]-2-[(pyruvoyloxy)methyl]propoxy}-5-oxopentanoic acid;

(2*S*)-2-amino-5-{2-nitro-3-(nitrooxy)-2-[(pyruvoyloxy)methyl]propoxy}-5-oxopentanoic acid;

35

- (2*S*)-2-amino-5-[3-(nitrooxy)-2-(pyruvoylamino)propoxy]-5-oxopentanoic acid;  
 (2*S*)-2-amino-5-({3-[(nitrooxy)methyl]-5-[(pyruvoyloxy)methyl]benzyl}oxy)-5-oxopentanoic acid;  
 (2*S*)-2-amino-5-[3-(nitrooxy)-2-(pyruvoyloxy)propoxy]-5-oxopentanoic acid;  
 5 (2*S*)-2-amino-5-{2-(nitrooxy)-1-[(pyruvoyloxy)methyl]ethoxy}-5-oxopentanoic acid;  
 (2*S*)-2-amino-5-({2-(nitrooxy)-1-[(pyruvoyloxy)methyl]ethyl}amino)-5-oxopentanoic acid;  
 4-(*N*-((1*R*)-1-(methoxycarbonyl)-2-(2-(*N*-(3-(nitrooxy)propyl)carbamoyl)-2-oxoethylthio)ethyl)carbamoyl)(2*S*)-2-aminobutanoic acid;  
 methyl (2*R*)-2-amino-3-((3-((2,2-dimethyl-3-(nitrooxy)propyl)amino)-2,3-dioxopropyl)thio)  
 10 propanoate;  
 4-(*N*-((1*R*)-2-(2-(*N*-(2,2-dimethyl-3-(nitrooxy)propyl)carbamoyl)-2-oxoethylthio)-1-(methoxycarbonyl)ethyl)carbamoyl)(2*S*)-2-aminobutanoic acid;  
 methyl (2*R*)-2-amino-3-((3-((2-(nitrooxy)-1-((nitrooxy)methyl)ethyl)amino)-2,3-dioxopropyl)thio)propanoate;  
 15 4-(*N*-((1*R*)-1-(methoxycarbonyl)-2-(2-(*N*-(2-(nitrooxy)-1-((nitrooxy)methyl)ethyl)carbamoyl)-2-oxoethylthio)ethyl)carbamoyl)(2*S*)-2-aminobutanoic acid;  
 methyl (2*R*)-2-amino-3-((3-(3-(nitrooxy)-2,2-bis((nitrooxy)methyl)propoxy)-2,3-dioxopropyl)thio)propanoate;  
 20 4-(*N*-((1*R*)-2-(2-((2,2-bis((nitrooxy)methyl)-3-(nitrooxy)propyl)oxycarbonyl)-2-oxoethylthio)-1-(methoxycarbonyl)ethyl)carbamoyl)(2*S*)-2-aminobutanoic acid;  
 methyl (2*R*)-2-amino-3-((3-(2-methyl-3-(nitrooxy)-2-((nitrooxy)methyl)propoxy)-2,3-dioxopropyl)thio)propanoate;  
 4-(*N*-((1*R*)-1-(methoxycarbonyl)-2-(2-((2-methyl-3-(nitrooxy)-2-((nitrooxy)methyl)propyl)oxycarbonyl)-2-oxoethylthio)ethyl)carbamoyl)(2*S*)-2-aminobutanoic acid;  
 25 methyl (2*R*)-2-amino-3-((3-(2-nitro-3-(nitrooxy)-2-((nitrooxy)methyl)propoxy)-2,3-dioxopropyl)thio)propanoate;  
 4-(*N*-((1*R*)-1-(methoxycarbonyl)-2-(2-((2-nitro-3-(nitrooxy)-2-((nitrooxy)methyl)propyl)oxycarbonyl)-2-oxoethylthio)ethyl)carbamoyl)(2*S*)-2-aminobutanoic acid;  
 30 methyl (2*R*)-2-amino-3-((3-(3-(nitrooxy)propoxy)-2,3-dioxopropyl)thio)propanoate;  
 4-(*N*-((1*R*)-1-(methoxycarbonyl)-2-(2-((3-(nitrooxy)propyl)oxycarbonyl)-2-oxoethylthio)ethyl)carbamoyl)(2*S*)-2-aminobutanoic acid;  
 methyl (2*R*)-2-amino-3-((3-(2,2-dimethyl-3-(nitrooxy)propoxy)-2,3-dioxopropyl)thio)propanoate;

4-(N-((1R)-2-(2-((2,2-dimethyl-3-(nitrooxy)propyl)oxycarbonyl)-2-oxoethylthio)-1-(methoxycarbonyl)ethyl)carbamoyl)(2S)-2-aminobutanoic acid;

methyl (2R)-2-amino-3-((3-(3-(nitrooxy)-2-((nitrooxy)methyl)propoxy)-2,3-dioxopropyl)thio)propanoate;

5 4-(N-((1R)-1-(methoxycarbonyl)-2-(2-((3-(nitrooxy)-2-((nitrooxy)methyl)propyl)oxycarbonyl)-2-oxoethylthio)ethyl)carbamoyl)(2S)-2-aminobutanoic acid;

methyl (2R)-2-amino-3-((3-(2-(nitrooxy)-1-((nitrooxy)methyl)ethoxy)-2,3-dioxopropyl)thio)propanoate;

10 4-(N-((1R)-1-(methoxycarbonyl)-2-(2-((2-(nitrooxy)-1-((nitrooxy)methyl)ethyl)oxycarbonyl)-2-oxoethylthio)ethyl)carbamoyl)(2S)-2-aminobutanoic acid;

methyl (2R)-2-amino-3-((3-((3,5-bis((nitrooxy)methyl)benzyl)oxy)-2,3-dioxopropyl)thio)propanoate;

15 4-(N-((1R)-2-(2-(((3,5-bis((nitrooxy)methyl)phenyl)methyl)oxycarbonyl)-2-oxoethylthio)-1-(methoxycarbonyl)ethyl)carbamoyl)(2S)-2-aminobutanoic acid;

methyl (2R)-2-(acetylamino)-3-((3-((2-(2-(nitrooxy)ethoxy)ethyl)amino)-2,3-dioxopropyl)thio)propanoate;

methyl (2R)-2-(acetylamino)-3-((3-((3-(nitrooxy)propyl)amino)-2,3-dioxopropyl)thio)propanoate;

20 2-(4-(2-(nitrooxy)ethoxy)phenoxy)ethyl 3-((2R)-2-(acetylamino)-2-(methoxycarbonyl)ethylthio)-2-oxopropanoate;

methyl (2R)-2-(acetylamino)-3-((3-((2,2-dimethyl-3-(nitrooxy)propyl)amino)-2,3-dioxopropyl)thio)propanoate;

25 methyl (2R)-2-(acetylamino)-3-((3-((3-((nitrooxy)methyl)benzyl)oxy)-2,3-dioxopropyl)thio)propanoate;

methyl (2R)-2-(acetylamino)-3-((3-((2-(nitrooxy)-1-((nitrooxy)methyl)ethyl)amino)-2,3-dioxopropyl)thio)propanoate;

methyl (2R)-2-(acetylamino)-3-((3-((4-((nitrooxy)methyl)benzyl)oxy)-2,3-dioxopropyl)thio)propanoate;

30 2,2-bis((nitrooxy)methyl)-3-(nitrooxy)propyl 3-((2R)-2-(acetylamino)-2-(methoxycarbonyl)ethylthio)-2-oxopropanoate;

2-methyl-3-(nitrooxy)-2-((nitrooxy)methyl)propyl 3-((2R)-2-(acetylamino)-2-(methoxycarbonyl)ethylthio)-2-oxopropanoate;

35 methyl (2R)-2-(acetylamino)-3-((3-(3-(nitrooxy)-2-((nitrooxy)methyl)propoxy)-2,3-dioxopropyl)thio)propanoate;

methyl (2*R*)-2-(acetylamino)-3-((3-(2-nitro-3-(nitrooxy)-2-((nitrooxy)methyl)propoxy)-2,3-dioxopropyl)thio)propanoate;

methyl (2*R*)-2-(acetylamino)-3-((3-(2-(nitrooxy)-1-((nitrooxy)methyl)ethoxy)-2,3-dioxopropyl)thio)propanoate;

5 methyl (2*R*)-2-(acetylamino)-3-((3-(3-(nitrooxy)propoxy)-2,3-dioxopropyl)thio)propanoate;  
(3,5-bis((nitrooxy)methyl)phenyl)methyl 3-((2*R*)-2-(acetylamino)-2-(methoxycarbonyl)ethylthio)-2-oxopropanoate;

methyl (2*R*)-2-(acetylamino)-3-((3-(2,2-dimethyl-3-(nitrooxy)propoxy)-2,3-dioxopropyl)thio)propanoate;

10 4-((2-(((2*R*)-2,3-bis(nitrooxy)propyl)oxycarbonyl)(2*S*)-2-(2-oxopropanoylamino)ethyl)oxycarbonyl)(2*S*)-2-aminobutanoic acid;  
(2*S*)-4-(((2*S*)-2-(((2*S*)-2,3-bis(nitrooxy)propyl)oxycarbonyl)-2-(2-oxopropanoylamino)ethyl)oxycarbonyl)-2-aminobutanoic acid;

4-(*N*-(4-(((2*R*)-2,3-bis(nitrooxy)propyl)oxycarbonyl)(4*S*)-4-(2-oxopropanoylamino)butyl)carbamoyl)(2*S*)-2-aminobutanoic acid;

(2*S*)-4-(*N*-(4-(((2*S*)-2,3-bis(nitrooxy)propyl)oxycarbonyl)-4-(2-oxopropanoylamino)butyl)carbamoyl)-2-aminobutanoic acid;

4-(*N*-(5-(((2*R*)-2,3-bis(nitrooxy)propyl)oxycarbonyl)(5*S*)-5-(2-oxopropanoylamino)pentyl)carbamoyl)(2*S*)-2-aminobutanoic acid;

20 (2*S*)-4-(*N*-(5-(((2*S*)-2,3-bis(nitrooxy)propyl)oxycarbonyl)-5-(2-oxopropanoylamino)pentyl)carbamoyl)-2-aminobutanoic acid;

5-((2*R*)-2-(((2*R*)-2,3-bis(nitrooxy)propyl)oxycarbonyl)-2-(2-oxopropanoylamino)ethylthio)(2*S*)-2-amino-5-oxopentanoic acid;

5-((2*R*)-2-(((2*S*)-2,3-bis(nitrooxy)propyl)oxycarbonyl)-2-(2-

25 oxopropanoylamino)ethylthio)(2*S*)-2-amino-5-oxopentanoic acid;

4-(*N*-(5-(*N*-(2-((2*R*)-2,3-bis(nitrooxy)propyl)carbamoyl)(5*S*)-5-(2-oxopropanoylamino)pentyl)carbamoyl)(2*S*)-2-aminobutanoic acid;

(2*S*)-4-(*N*-(5-((5-((2*S*)-2,3-bis(nitrooxy)propyl)carbamoyl)-5-(2-oxopropanoylamino)pentyl)carbamoyl)-2-aminobutanoic acid;

30 (2*S*)-4-(*N*-(5-((2,2-bis((nitrooxy)methyl)-3-(nitrooxy)propyl)oxycarbonyl)-5-(2-oxopropanoylamino)pentyl)carbamoyl)-2-aminobutanoic acid;

(2*S*)-4-(*N*-(5-(((6*S*, 2*R*)-6-(nitrooxy)-4,8-dioxabicyclo(3.3.0)oct-2-yl)oxycarbonyl)-5-(2-oxopropanoylamino)pentyl)carbamoyl)-2-aminobutanoic acid;

(2*S*)-4-(*N*-(5-(((2*S*, 6*R*)-6-(nitrooxy)-4,8-dioxabicyclo(3.3.0)oct-2-yl)oxycarbonyl)-5-(2-oxopropanoylamino)pentyl)carbamoyl)-2-aminobutanoic acid;

35 oxopropanoylamino)pentyl)carbamoyl)-2-aminobutanoic acid;



4-(((1E)-2-(N-((2R)-2,3-bis(nitrooxy)propyl)carbamoyl)-1-azaprop-1-enyl)oxycarbonyl)(2S)-2-aminobutanoic acid;

4-(((1E)-2-(N-((2S)-2,3-bis(nitrooxy)propyl)carbamoyl)-1-azaprop-1-enyl)oxycarbonyl)(2S)-2-aminobutanoic acid;

5 4-(N-((1E)-2-(N-((2R)-2,3-bis(nitrooxy)propyl)carbamoyl)-1-azaprop-1-enyl)carbamoyl)(2S)-2-aminobutanoic acid;

4-(N-((1E)-2-(N-((2S)-2,3-bis(nitrooxy)propyl)carbamoyl)-1-azaprop-1-enyl)carbamoyl)(2S)-2-aminobutanoic acid;

10 4-(N-(1-(((2R)-2,3-bis(nitrooxy)propyl)oxycarbonyl)(1S)-5-(2-oxopropanoylamino)pentyl)carbamoyl)(2S)-2-aminobutanoic acid;

(2S)-4-(N-((1S)-1-(((2S)-2,3-bis(nitrooxy)propyl)oxycarbonyl)-5-(2-oxopropanoylamino)pentyl)carbamoyl)-2-aminobutanoic acid;

4-(N-(1-(N-((2R)-2,3-bis(nitrooxy)propyl)carbamoyl)(1S)-5-(2-oxopropanoylamino)pentyl)carbamoyl)(2S)-2-aminobutanoic acid;

15 (2S)-4-(N-((1S)-1-(N-((2S)-2,3-bis(nitrooxy)propyl)carbamoyl)-5-(2-oxopropanoylamino)pentyl)carbamoyl)-2-aminobutanoic acid;

4-(N-(1-(((2R)-2,3-bis(nitrooxy)propyl)oxycarbonyl)(1S)-2-(2-oxopropanoyloxy)ethyl)carbamoyl)(2S)-2-aminobutanoic acid;

20 (2S)-4-(N-((1S)-1-(((2S)-2,3-bis(nitrooxy)propyl)oxycarbonyl)-2-(2-oxopropanoyloxy)ethyl)carbamoyl)-2-aminobutanoic acid;

4-(N-(1-(((2R)-2,3-bis(nitrooxy)propyl)oxycarbonyl)(1S)-4-(2-oxopropanoylamino)butyl)carbamoyl)(2S)-2-aminobutanoic acid;

(2S)-4-(N-((1S)-1-(((2S)-2,3-bis(nitrooxy)propyl)oxycarbonyl)-4-(2-oxopropanoylamino)butyl)carbamoyl)-2-aminobutanoic acid; or a pharmaceutically acceptable salt thereof.